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# Overview of XSEDE Education Program

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# XSEDE

Extreme Science and Engineering  
Discovery Environment



# Overview

- Goals of the XSEDE Education Program
- Review of education program services
  - Campus visits
  - Faculty professional development workshops
  - Promoting formal academic programs
  - Special workshops for faculty and students
  - Repository of shared materials



# XSEDE Education Program Goals

- Prepare the current and next generation of researchers, educators and practitioners.
- Create a significantly larger and more diverse workforce in STEM.
- Inculcate the use of digital services as part of their routine practice for advancing scientific discovery.



XSEDE

# Initiating Services to Facilitate Change

- Campus visits
  - First discussions about integrating computational science into the curriculum
  - Discussion of formal programs
  - Opportunities for faculty professional development
  - Overview of related XSEDE services



# Developing Faculty Expertise

- Faculty professional development workshops
  - Two to six day workshops on a variety of topics
    - Computational thinking
    - Computational science education in science and engineering domains
  - Focus on local/regional audiences to reduce travel costs
  - Subsidies for faculty to travel to workshops at other sites





# Promoting Formal Academic Programs

- XSEDE Education program is focused on assisting with the initiation and enhancement of formal computational science and engineering programs
  - Both undergraduate and graduate programs
  - Most sustainable way to help achieve the long-term project goals by producing a savvy workforce
  - Reduce the barriers to program adoption by
    - Providing program models and assistance with development
    - Solidifying a virtual community to share experiences
    - Providing faculty professional development



# Special Workshops for Faculty and Students

- Development of synchronous and asynchronous education and training sessions
  - Multi-site broadcasts of workshops
  - Online training and education modules
  - Experimenting with full courses that can be widely shared for credit and non-credit inclusion in curricula

# Repository of Shared Materials

- Developing a repository of computational science education materials
  - Reviewed by professional staff and faculty
  - Indexed by subject and a detailed competency-based ontology
  - Goal: trusted, comprehensive source of information for computational science educators
  - Expect “beta” version by beginning of 2013





# Questions and Discussion

